

MEMORANDUM FOR: Chairman, Technical Development Committee

THROUGH : Executive Secretary, TDC

SUBJECT : Staff Study - Contract XG 6273, VO 63-100,242
"HTA/5 Film Processor"

1. PROBLEM:

To find a mutually agreeable basis for acceptance of the prototype HTA/5 Film Processor, prior to complete fulfillment of all requirements, in order to avoid serious delay in projected programs using liquid-air bearings and other advanced processing concepts.

2. FACTS:

a. The prototype HTA/5 processor was developed under the subject contract. It accommodates roll film from 70mm to 9 $\frac{1}{2}$ inches in width. It employs a new concept of film transport which passes the exposed film through the various chemical solutions over non-rotating liquid and air bearings, instead of revolving rollers. This permits the film to be transported through the entire processing cycle from feed to take-up without touching either the emulsion or base side of the film.

b. The prototype was completed in September of 1963 and delivered to March Air Force Base, California, on 30 September 1963, for acceptance tests and extensive additional tests imposed by SAC.

c. Throughout the series of tests by the 15th Reconnaissance Technical Squadron at MAFB, the processor tended toward relatively minor malfunctions from a variety of causes. As stated in the 5 November 1963 Inspection Report, operation of the HTA/5 processor has not been sufficiently reliable to justify acceptance for final payment.

STATOTHR

d. As late as 17 November 1963, three [REDACTED] engineers were attempting to eliminate the final causes of machine malfunction. Most of their effort was devoted to failure of the processor to track and drive film of 2.5 mil thickness, a specific requirement covered in the contract. Thin base film adhered to and wrapped around the vacuum drive capstan at the entrance to the dry box instead of feeding film into the dry box as it was designed to do. It was thought that this problem had been solved by installing an air baffle in the dry box. This proved to be unsuccessful when tested on 17 November 1963. Since it is normal for the film to be tacky and susceptible to sticking as it enters the dry box, the contract monitor suggested coating the vacuum capstan with Teflon, a substance to which few things will stick. This was done and the capstan was ready for reinstallation on 22 November. However, on the preceding afternoon, the 15th Rec. Tech. Squad. barred further access to the HTA/5 space for an indefinite

STATOTHR

STATOTHR

period because of a very highly classified program. Since that time, [REDACTED] has been unable to accomplish further work on the HTA/5 machine, even though they have been ready and willing to do so. On 20 December 1963, Lt. Colonel William Richards of MAFB said that he could no longer furnish the space and requested that the processor be removed as soon as possible to allow installation of new equipment.

STATOTHR

e. Therefore, it is mandatory to have the processor recreated and returned to the [REDACTED] plant without final acceptance. This move will be at Government expense. A request will be initiated for early contract action to have the processor shipped to [REDACTED] Boulevard. It was a part of the original development plan to have the processor returned to [REDACTED] for modifications based on test findings at MAFB. This move, however, was not to be made until all tests had been completed and the machine was accepted.

STATOTHR

STATOTHR

3. DISCUSSION:

a. Since the processor has not yet proved fully acceptable, the contractor could legally be required to make the necessary corrections at his own expense. This, however, does not appear justified in view of the circumstances. It must be recognized that the HTA/5 processor embodies entirely new concepts that have presented extraordinary problems for solution. The contractor is willing and able to meet his obligation but cannot do so because the machine is unavailable to him. It would be very costly and hardly reasonable to require the contractor to reinstall the processor in his plant, at his expense, to prove acceptable performance. The contractor claims to have already exceeded the original \$95,000.00 contract price by an estimated \$125,000.00.

b. In spite of the failure of the HTA/5 to fully meet requirements, it has served a worthwhile purpose by clearly demonstrating the feasibility of these concepts, which will significantly advance the art and technology of film processing. In addition, very significant performance data has been obtained that will be invaluable as a basis for establishing design parameters for future development in this area.

c. Instead of pressing for full satisfaction in this machine, it is felt that the prototype HTA/5 processor should be accepted as is, on some basis equitable to both the Government and the contractor. Due consideration should be given to the fact that the contractor was asked to accept a rather formidable development, involving several new concepts, on a fixed price basis, and that the original contract price has been greatly exceeded.

d. A Processor Research Program presently being formulated proposes use of the prototype HTA/5 processor on a GFE basis as a vehicle for specified research efforts on liquid-air bearings and other advanced processing concepts.

SECRET

4. CONCLUSIONS:

a. Under the circumstances, to press for full satisfaction with the present HTA/5 would seriously delay the projected program. There are no compensating advantages.

b. The present HTA/5 processor has served a worthwhile purpose. It should be accepted as is with mutually agreeable monetary settlement.

5. RECOMMENDATIONS:

It is recommended that:

a. The prototype HTA/5 processor be accepted. STATOTHR

b. Station 954 arrange a conference with the [REDACTED] Corporation at the earliest possible date to negotiate acceptance and final contract settlement.

25X1A

[REDACTED]
Development Branch, P&DS

SECRET